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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/547,791	04/12/2000	Steven Beck	1481.0170000	5403

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EXAMINER

SHAFFER, ERIC T

ART UNIT

PAPER NUMBER

3623

DATE MAILED: 02/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/547,791

Applicant(s)

BECK ET AL.

Examiner

Eric T. Shaffer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

1. The following is an initial Office Action upon examination of the above-identified application on the merits. Claims 1 – 28 are pending in this application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. **Claims 1 –28** are rejected under 35 U.S.C. 102(e) as being anticipated by McCabe et al. (US 6,453,216).

Claims 1, 8, 15 and 22 are a weather-based and terrestrial vegetation-based system and method for forecasting renovation and management for a body of water. Using weather data and vegetation soil moisture data to manage the volume of water used or available in storage for use in the irrigation of agricultural products or vegetation is anticipated by McCabe et al, which discloses “if an irrigation system is operated according to the method of the present invention, then the largest possible portion of water needed by the crop of turf will be contributed by natural rainfall and the least irrigation water will be used, consistent with maintaining a proper level of soil moisture for the crop or turf being irrigated” (column 6, lines 48 - 54).

The system and method comprising:

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means for accessing a database having stored therein data for analyzing the body of water, wherein said database includes one or more of weather history data, weather forecast data, body of water history data, a list of problems, and a list of solutions; A database of weather history data is anticipated by McCabe et al, which discloses "Table 1 shows the historical average rainfall by month for several major Texas cities" (column 6, lines 54 - 57).

a front end system to receive a request from a user to analyze the body of water for renovation and management; User entry of data to instigate an analysis of an aspect of water management is anticipated by McCabe et al, which discloses "for a similar flow rate knowledge (or a guess), the amount of water to be applied to a station is based on the user entry (specification) of the amount of inches that the controller is to apply. The controller then calculates the required run time (typically in minutes) from the user specification" (column 13, lines 4 - 10).

a renovation system to execute said request by using one of more of said weather history data, said weather forecast data, said body of water history data, said list of problems, and said list of solutions to determine potential problems for the body of water and potential solutions for said potential problems. Using weather history data and rainfall measurements to determine how much water to use in the irrigation of a field is anticipated by McCabe et al, which discloses "irrigation controllers apply water by controlling the amount of time a station is on in a fixed number of minutes, seconds, or other base time. The amount of water applied is based upon an estimate, a guess, or a previous measurement" (column 13, lines 16 - 18).

4. **Claims 2, 9, 16 and 23** are a system and method, wherein said database data are either passed in via said front end system, collected by said renovation system, or derived by said

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renovation system. Database data passed into a database via a front-end system is anticipated by McCabe et al, which discloses “the present invention next uses whatever weather inputs and soil inputs are available to calculate a start time that is proper to allow the irrigation system to deliver the necessary water” (column 6, lines 34 - 37).

5. **Claims 3, 10, 17 and 24** are a system and method, wherein said front-end system is a web server. Sending data messages to remote locations by way of a communications network, one type of such communications networks being a web server, is anticipated by McCabe et al, which discloses “one or more messages are sent via various remote data communication methods to one or more irrigation controllers” (column 10, lines 54 - 56).

6. **Claims 4, 11, 18 and 25** are a system and method, wherein said renovation system comprises:

processing modules for performing processing functions; Creating software that uses specific data comparison operators to performing a processing function, whereby a function is executed if a given rule is true or false, is anticipated by McCabe et al, which discloses “if the probability of rain is sufficiently high then there is little risk to the plants if the irrigation event is skipped” (column 10, lines 59 – 61), where formal rules that use specific data comparison operators is anticipated by the rule “Delay a full day if the Probability > 90%, reduce irrigation a special fraction when the 60% probability <= 90%” (column 11, lines 2 - 7).

administration modules for performing administration functions; Creating software to perform the administrative function of time scheduling is anticipated by McCabe et al, which discloses “this method of scheduling can also be combined with end time based scheduling to achieve even greater water savings” (column 12, lines 36 - 38).

background modules for performing background functions required by said processing modules and said administration modules. The background module of a clock is anticipated by McCabe et al, which discloses “when the controller’s clock matches or exceeds the start time, the controller activates appropriate hardware” (column 11, lines 11 - 12).

7. **Claims 5, 12, 19 and 26** are a system and method, wherein said list of problems is comprised of a list of observable problems and a list of fundamental problems. An observable problem is anticipated by McCabe et al, which discloses “use of these typical or average crop coefficients to calculate the amount of water to apply to a crop could result in either over or under watering in a real world situation” (column 9, lines 57 - 60), while fundamental problems are anticipated by McCabe et al, which discloses “methods to determine the amount of water to apply to a station can suffer from problems when used with newly planted landscapes” (column 13, lines 31 - 34).

8. **Claims 6, 13, 20 and 27** are a system and method, wherein said processing modules comprise:

an analyzer module to determine the impact said weather history data had on actual observable problems of the body of water; The use of weather inputs to determine the impact on water supply problems is anticipated by McCabe et al, which discloses “the method of the present invention next uses whatever weather inputs and soil inputs are available to calculate a start time that is proper to allow the irrigation system to deliver the necessary water” (column 6, lines 34 - 37).

a diagnosis module to determine actual fundamental problems for the body of water based on said actual observable problems; Use of observable problems to analyze and solve

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problems related to the actual problems of a water supply is anticipated by McCabe et al, which discloses “irrigation controllers using moisture sensors, evapotranspiration and/or other methods to determine the amount of water to apply to a station” (column 13, lines 31 - 34).

a remedy module to determine the impact said weather forecast data will have on said actual fundamental problems based on the impact said weather history data had on said actual observable problems, and then to determine, based on the impact said weather forecast data will have on said actual fundamental problems, one or more solutions for said actual fundamental problems; Using weather and crop/soil data to remedy the observable problem of determining how much water to apply to crops is anticipated by McCabe et al, which discloses “the method of least squares regression analysis, or other effective curve means, is used to determine an actual in situ characteristic curve for the specific crop/soil combination being irrigated. Next this in situ characteristic curve is used to calculate the amount of water required to bring the soil moisture or tension from its measured present value to the desired value for each watering event” (column 9, line 65 – column 10, line 36).

a compliance module to determine compliance for each of said solutions; Using data to initiate action which enables a water application system to comply with a chosen set of irrigation solutions is anticipated by McCabe et al, which discloses “measured rainfall can be used to stop, delay, and/or adjust the amount of remaining water to apply to meet the needs of the plants while minimizing the amount of irrigation water used” (column 12, lines 49 - 53).

a cost module to determine for each of said solutions a list of factors that will aid the user in the renovation and management of the body of water. The factors used to manage how large a body of water is needed to maintain crops is anticipated by McCabe et al, which discloses “this

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method of the invention requires a measurement of water applied, requires measurement of soil tension and/or moisture content and water events must be qualified to remove erroneous values” (column 10, lines 40 - 46).

9. **Claims 7, 14, 21 and 28** are a system and method, wherein said list of factors include one or more of estimated cost, years to complete, possible funding, and timing of implementation. Timing of implementation as per the fixed time required to apply water is anticipated by McCabe et al, which discloses “controllers apply water by controlling the amount of time a station is on a fixed number of minutes, seconds, or other time base” (column 13, lines 15 - 17).

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Conclusion

10. No claims were allowed and all claims were rejected.
11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sharr (US 5,979,363) – System for irrigation of farms
Hodge (US 4,342,125) – Water level controller for swimming pools
<http://www.irrigation.com> - Archived on February 19, 1999. Trade web site on golf, agriculture and landscape irrigation.

12. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric Shaffer whose telephone number is (703) 305-5283. The Examiner can normally be reached on Monday-Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (703) 305-9643.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington D.C. 20231

Or faxed to:

(703) 746-7238	[After Final communications, labeled "Box AF"]
(703) 746-7239	[Official communications]
(703) 706-9124	[Informal/Draft communications, labeled "PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to Crystal Park 2, 2121 Crystal Drive, Arlington, VA, 4th floor receptionist.

ETS
February 7, 2003

Susanna Diaz
Susanna Diaz
Patent Examiner
Art Unit 3623